



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,405	02/05/2004	Gerwin Preisinger	024943-057	3822

21839 7590 03/24/2008
BUCHANAN, INGERSOLL & ROONEY PC
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

THOMAS, LUCY M

ART UNIT	PAPER NUMBER
----------	--------------

2836

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

03/24/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary	Application No. 10/771,405	Applicant(s) PREISINGER ET AL.	
	Examiner Lucy Thomas	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/03/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 18-19, 22 is/are rejected.
- 7) ☒ Claim(s) 4-17, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Susumu et al. (JP 10 014159) in view of Op Het Veld et al. (US 6,127,778). Regarding Claim 1, Susumu et al. discloses a device (see Abstract and drawings 1-5) for protecting 4 a bearing of an electrical machine against damaging passage of current, wherein the electrical machine comprises a stator 5 and a rotor 2 pivotally mounted relative to the stator by the bearing, the device comprising a compensation circuit (see 12, 10 in Figure 3) for eliminating or removing a parasitic current arising during operation of the electrical machine and passing through the bearing; and a coupling element (see 13 in Figure 3) for direct or indirect coupling (of the parasitic current to ground).

Susumu's device differs as the compensation circuit does not produce a compensation current having a corresponding magnitude as the parasitic current but opposite in phase to the parasitic current, and the coupling element is for coupling the parasitic current to ground not for coupling a compensation current into the bearing.

Op Het Veld teaches a compensation circuit (compensation conductor) which produces a compensation current having corresponding magnitude as a parasitic

current but opposite in phase to the parasitic current and coupling circuit (capacitance between ground and the compensation conductor) for coupling the compensation current (see Column 1 ,lines 42-64). Op Het Veld differs as the compensation current is not coupled into the bearing of a motor (Op Het Veld's circuit is for a lamp holder).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Susumu and to provide a compensation current and means to couple the compensation current into the bearing, because Op Het Veld teaches that parasitic current can be compensated by a compensation current of same magnitude and opposite phase, and both references, Susumu and Op Het Veld solve the same problem, compensating parasitic current, by producing compensating current and providing a (capacitive) coupling means.

Regarding Claim 2, Susumu et al. discloses the compensation circuit, which comprises a point at which phase voltages for operation of the electrical machine are found (see figure 3). The recitation of star point is to indicate a point at which the sum of phase currents is zero and sum of and phase voltages is zero, and the recitation of artificial is to indicate that the phase-to-neutral values are artificial, in a 3-wire wye configured system.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Susumu et al. (JP 10 014159)in view of Op Het Veld et al. (US 6,127,778) and Desai et al. (US 6, 449, 567). Regarding Claim 3, Susumu does not disclose three identical impedances, which forms the artificial star point. Desai et al. discloses three impedances Z_a , Z_b , and Z_c , which form the artificial star point 51 (Figure 2). It would have been obvious to one

of ordinary skill in the art at the time the invention was made to include the identical impedances, which necessarily is part of generating an artificial star point in three phase systems, as shown in the drawings to simplify and facilitate connection of a conventional three phase protection circuit to the device taught by Susumu.

Claims 18-19 and 22 basically recite the elements of Claims 1-2, except the recitation of compensation circuit (Claim 1) versus means for producing a compensation current (Claim 18), and recitation of means for producing compensating current of opposite phase (Claim 18).

Allowable Subject Matter

4. Claims 4-10, 11-17, and 20-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Regarding Claims 4, 11, and 20, Susumu, Op Het Veld, or Desai disclose the device, wherein the compensation circuit also comprises a polarity reversal transformer having a primary side to which the star point voltage is supplied at least in part and a secondary side which produces a voltage opposite in phase to the star point voltage.

Baumgartl discloses a voltage transformer T1, having a primary side and a secondary side, and the secondary connected to the star point (Figure, Column 1, lines 50-65, Column 2, lines 18-32). Baumgartl differs as the transformer is not disclosed as a polarity reversal transformer with primary connected to a star point voltage to produce a voltage opposite in phase to the star point voltage. This limitation, a polarity reversal transformer, in a compensation circuit, having a primary side to which a star point

Art Unit: 2836

voltage is supplied at least in part and a secondary side which produces a voltage opposite in phase to the star point voltage, in combination with the other recited elements, is not disclosed by the prior art of record, and therefore allowable. Claims 5-10 depend on Claim 4, Claims 12-17 depend on Claim 11, and Claims 21 depends on Claim 20.

Response to Arguments

6. Applicant's arguments filed 12/03/2007 have been fully considered.

Regarding Applicant's arguments toward Susumu and Op Het Veld references: Susumu reference discloses all elements of Claim 1, except that the compensation circuit does not produce a compensation current having a corresponding magnitude as the parasitic current but opposite in phase to the parasitic current, and the coupling element is for coupling the parasitic current to ground not for coupling a compensation current into the bearing.

Op Het Veld reference is relied upon solely for the teaching of producing a compensation current having corresponding magnitude as a parasitic current but opposite in phase to the parasitic current and coupling circuit (capacitance between ground and the compensation conductor) for coupling the compensation current (see Column 1 ,lines 42-64). Both references solve the same problem, compensating parasitic current.

The element 12 of the primary reference, Susumu reads on the claimed limitation, "a compensation circuit which compensates for a parasitic current arising

during operation of the electrical machine and passing through the bearing,” not the compensating conductor 6 of Op Het Veld.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy Thomas whose telephone number is 571-272-6002. The examiner can normally be reached on Monday - Friday 8:00 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2836

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Sherry/
Supervisory Patent Examiner, Art Unit 2836

LT
March 14, 2008